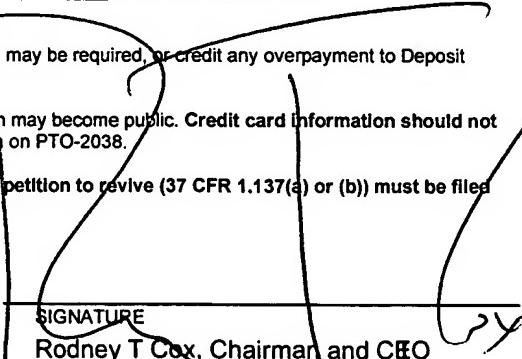
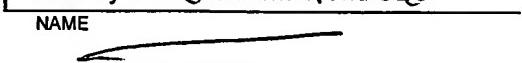


Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

|  |  |  |
|--|--|--|
| <b>TRANSMITTAL LETTER TO THE UNITED STATES<br/>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br/>CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>  |  | ATTORNEY'S DOCKET NUMBER<br><b>12091</b><br>U.S. APPLICATION NO. (If known, see S. OFFR 1.5)<br><b>107534633</b> |
| INTERNATIONAL APPLICATION NO.<br><b>PCT/IB2003/006484</b>  | INTERNATIONAL FILING DATE<br><b>27 NOVEMBER 2003</b> | PRIORITY DATE CLAIMED<br><b>27 NOVEMBER 2002</b>   |
| <b>TITLE OF INVENTION</b><br><b>Method for Increasing Efficiency of Thermotunnel Devices</b>   |  |  |
| <b>APPLICANT(S) FOR DO/EO/US</b><br><b>Avto TAVKHELIDZE and Leri TSAKADZE</b>  |  |  |
| <p>Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:</p> <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a submission under 35 U.S.C. 371.</li> <li>2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371.</li> <li>3. <input type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</li> <li>4. <input type="checkbox"/> The US has been elected (Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input checked="" type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</li> <li>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol> <p>Items 11 to 20 below concern document(s) or information included:</p> <ol style="list-style-type: none"> <li>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li>13. <input checked="" type="checkbox"/> A preliminary amendment.</li> <li>14. <input type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.</li> <li>15. <input type="checkbox"/> A substitute specification.</li> <li>16. <input type="checkbox"/> A power of attorney and/or change of address letter.</li> <li>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821-1.825.</li> <li>18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).</li> <li>19. <input type="checkbox"/> A second copy of the English language translation of the International Application under 35 U.S.C. 154(d)(4).</li> <li>20. <input type="checkbox"/> Other items or information:</li> </ol> |  |  |

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

|   |  |                                      |            |          |
|---|--|--------------------------------------|------------|----------|
| U.S. APPLICATION NO. (if known, see 37 CFR 1.5)<br><b>10/534633</b>   | INTERNATIONAL APPLICATION NO.<br>PCT/IB2003/006484 | ATTORNEY'S DOCKET NUMBER<br>12091    |            |          |
| 21. <input checked="" type="checkbox"/> The following fees are submitted:   |  | CALCULATIONS PTO USE ONLY            |            |          |
| <b>BASIC NATIONAL FEE (CFR 1.492(a)(1)-(5)):</b>  |  |                                      |            |          |
| Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO and International Search Report not prepared by the EPO or JPO..... \$1080.00  |  |                                      |            |          |
| International preliminary examination fee (37 CFR 1.482) not paid to USPTO but International Search Report prepared by the EPO or JPO ..... \$920.00  |  |                                      |            |          |
| International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO ..... \$770.00   |  |                                      |            |          |
| International preliminary examination fee (37 CFR 1.482) paid to USPTO but all claims did not satisfy provisions of PCT Article 33(1)-(4) ..... \$730.00  |  |                                      |            |          |
| International preliminary examination fee (37 CFR 1.482) paid to USPTO and all claims satisfied provisions of PCT Article 33(1)-(4) ..... \$100.00  |  | \$ 920.00                            |            |          |
| <b>ENTER APPROPRIATE BASIC FEE AMOUNT = \$920.00</b>  |  |                                      |            |          |
| Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).  |  | \$                                   |            |          |
| CLAIMS  | NUMBER FILED                                       | NUMBER EXTRA                         | RATE       | \$       |
| Total claims  | 21 - 20 =  | 1                                    | X \$18.00  | \$ 18.00 |
| Independent claims  | 3 - 3 =  |                                      | X \$86.00  | \$       |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable)   |  |                                      | + \$290.00 | \$       |
|   |  | <b>TOTAL OF ABOVE CALCULATIONS =</b> | \$ 938.00  |          |
| <input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by ½.   |  |                                      | \$ 469.00  |          |
|   |  | <b>SUBTOTAL =</b>                    | \$ 469.00  |          |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).   |  | + \$                                 |            |          |
|   |  | <b>TOTAL NATIONAL FEE =</b>          | \$ 469.00  |          |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property  |  | + \$                                 |            |          |
|   |  | <b>TOTAL FEES ENCLOSED =</b>         | \$ 469.00  |          |
|   |  | Amount to be refunded:               | \$         |          |
|   |  | Amount to be charged:                | \$         |          |
| <p>a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. _____. A duplicate copy of this sheet is enclosed.</p> <p>d. <input checked="" type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p> |  |                                      |            |          |
| NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.  |  |                                      |            |          |
| SEND ALL CORRESPONDENCE TO:<br><br>BOREALIS TECHNICAL LIMITED<br>23545 NW SKYLINE BLVD<br>NORTH PLAINS<br>OR 97133-9205   |  |                                      |            |          |
| <div style="text-align: center;"> <br/> <b>SIGNATURE</b><br/> Rodney T Cox, Chairman and CEO<br/> NAME<br/> <br/> REGISTRATION NUMBER </div>  |  |                                      |            |          |